

In re Patent Application of:  
**FOLIO**  
Serial No. 09/896,894  
Filed: JUNE 29, 2001

a supplemental audio content player for playing supplemental audio content during playing of the motion picture and associated soundtrack;

*PG* an infrared transmitter connected to said supplemental audio content player;

at least one earphone to be worn by the at least one movie patron; and

at least one infrared receiver connected to said at least one earphone and cooperating with said infrared transmitter to deliver supplemental audio content to the at least one movie patron.

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**REMARKS**

The Applicant thanks the Examiner for the thorough examination of the present application. The specification has been amended to correct the minor informalities helpfully pointed out by the Examiner. Proposed drawing modifications are also submitted herewith. Claim 44 has also been amended to correct a minor informality. In a telephone conference with the Examiner on September 19, 2002, the Examiner noted that although reference "AR" was not marked as having been considered on the information disclosure statement, the Examiner likely considered the reference and, as such, will review the IDS to ensure that all references have been considered, and will confirm such.

Attached hereto is a marked-up version of the changes made to the specification and Claim 44 by the current amendment. The attached pages are captioned "Version with Markings to Show Changes Made."

In view of the supporting arguments presented in detail below, it is submitted that all of the claims are patentable.

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### I. The Invention

The present invention, as recited in independent Claim 1, for example, is directed to a supplemental audio content system for providing supplemental audio content to at least one movie patron during playing of a motion picture film and associated soundtrack in a cinema of a cineplex comprising a plurality of individual cinemas. The supplemental audio content system includes a supplemental audio content player for playing supplemental audio content during playing of the motion picture and associated soundtrack. A wireless transmitter is connected to the supplemental audio content player. The supplemental audio content system further includes at least one earphone to be worn by the at least one movie patron. At least one wireless receiver is connected to the at least one earphone and cooperates with the wireless transmitter to deliver supplemental audio content to the at least one movie patron. The wireless transmitter and wireless receiver have operating characteristics to avoid interference with respective supplemental audio content systems for other cinemas of the cineplex.

Independent Claim 19, for example, is also directed to a supplemental audio content system, and further recites at least one movie patron unit that includes an earphone, and a wireless receiver connected thereto and cooperating with the wireless transmitter to deliver supplemental audio content to the at least one movie patron. Independent Claim 32, for example, recites that the wireless transmitter includes a spread spectrum modulator, and the wireless receiver includes a spread spectrum demodulator. Independent Claim 44, for example, recites an infrared transmitter connected to the supplemental audio content player, and an infrared receiver connected to the earphone and cooperating with the wireless transmitter to deliver supplemental

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audio content to the movie patron. Independent Claim 51 is directed to a method aspect of the present invention.

**II. Independent Claims 1, 19, 32, and 51 are patentable over Karamon et al. in view of Oltman et al.**

The Examiner rejected independent Claims 1, 19, 32, and 51 over the Karamon et al. patent in view of the Oltman et al. patent. More particularly, the Examiner contended that the Karamon et al. patent discloses auxiliary audio being synchronized with the conventional audio portion of the cinema. The Examiner further contended that Oltman et al. discloses wireless transmission of audio through the use of wireless transmitters and receivers. The Examiner then concluded that it would have been obvious to use the wireless headphone system disclosed by Oltman et al. in combination with the system disclosed by Karamon et al. to allow audience members to be seated wherever they desire instead of in preselected locations, as disclosed in Karamon et al.

Applicant submits that a selective combination of the Karamon et al. and Oltman et al. patents still fails to produce the claimed invention. Karamon et al. discloses the synchronization of a higher quality sound track with the ordinary motion picture sound track, or a sound track of a different language with the ordinary motion picture sound track so that segments of a cinema audience sitting in preselected seats may choose a translation sound track. More particularly, the Karamon et al. patent notes that the auxiliary digital sound source is "locked in time" to an analog sound track of a cinema film (column 1, lines 22-25), and that the visual information is shown

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in conjunction with the auxiliary audio, "which is in perfect synchronism with the picture" (column 3, lines 1-11).

The Oltman et al. patent discloses a wireless headphone system to permit transient individuals to roam within a predetermined area while enhancing the sound quality delivered to the individuals. More specifically, the Oltman et al. patent discloses that the sound received electronically over the wireless channel will be "slightly behind the phase of the sound arriving to the listener from the main loudspeaker" (column 3, lines 53-55). Further, the Oltman et al. wireless headphones include a transmitter and receiver which utilizes an unlicensed frequency band defined by the FCC for in-home and short-range use.

The Applicant submits that a combination of the Karamon et al. patent and the Oltman et al. patent still fails to teach or suggest a wireless transmitter connected to a supplemental audio content player, and a wireless receiver connected to an earphone worn by the movie patron that has operating characteristics to avoid interference with respective supplemental audio content systems for other cinemas. Accordingly, a combination of the Karamon et al. and Oltman et al. patents fail to teach the claimed invention.

The Applicant further submits that the Karamon et al. patent actually teaches away from a combination with the Oltman et al. patent. The Karamon et al. patent discloses an apparatus and method for synchronizing an auxiliary sound source containing multiple language channels with a motion picture containing a sound track. As noted above, the Karamon et al. patent discloses "perfect synchronism", while the Oltman et al. patent discloses that the sound received over the wireless channel is "slightly behind" the phase of the sound arriving from the speaker.

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Accordingly, any combination of the Oltman et al. patent with the Karamon et al. patent would make the purpose of the Karamon et al. patent fail, i.e., the delayed synchronism of the Oltman et al. headphones would destroy the "perfect synchronism" of the Karamon et al. system. Therefore, a combination of the Karamon et al. and Oltman et al. patents is improper.

**III. Independent Claim 44 is patentable over Karamon et al. in view of Oltman et al., and further in view of Denenberg**

The Examiner rejected independent Claim 44 over the Karamon et al. patent, in view of the Oltman et al., and further in view of Denenberg. More particularly, the Examiner contended Denenberg discloses a wireless headset capable of infrared transmission. The Denenberg patent discloses a wireless headset with active noise cancellation using either infrared or radio frequency control. More specifically, the wireless headset is used in emergency vehicles to block the noise of the siren and allow emergency personnel to communicate.

Applicant submits that a combination of the Karamon et al., Oltman et al., and Denenberg patents fails to teach or suggest the claimed invention. More specifically, the combination fails to teach or suggest an infrared transmitter connected to a supplemental audio content player, and an infrared receiver connected to an earphone that cooperates with the infrared transmitter to deliver supplemental audio content to a movie patron.

Applicant further submits that the Karamon et al. patent actually teaches away from a combination with the Oltman et al. patent. As noted above, the Karamon et al. patent discloses "perfect synchronism", while the Oltman et al. patent discloses that the sound received over the wireless channel is

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"slightly behind" the phase of the sound arriving from the speaker. Any combination of these references along with the Denenberg infrared headphones would also be improper as Karamon et al. teaches away from such a combination.

CONCLUSIONS

Accordingly, it is submitted that independent Claims 1, 19, 32, 44, and 51 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

In view of the amendments to the claims and specification, and the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Specification:**

Please amend the paragraph beginning at page 2, line 12 as follows:

Along these lines, U.S. Patent No. 5,386,255 to Beard et al. discloses a digital sound system for motion picture films wherein a digital time code is provided on the film. The digital time code is read during playing of the film, and, together with zero crossing data from the power line, is used to synchronize a digital soundtrack stored on [an] a compact disk or digital audio tape. Accordingly, the film can be played back in theaters using either the analog or digital sound tracks.

Please amend the paragraph beginning at page 8, line 25 as follows:

Each of the cinemas **21a-21d** includes a respective room **22a-22d** with a screen **[24a-24d] 25a-25d** at the forward wall thereof to display the projected movie image. The rooms **22a-22d** illustratively include doors **26a-26d** which open into a common hallway. Stairs **33a-33d** lead alongside the illustrated seating areas **32a-32d** as will be appreciated by those skilled in the art. Of course, other room and seating configurations are possible and contemplated by the present invention.

Please amend the paragraph beginning at page 9, line 16 as follows:

Each projector **23a, 23b** may be of the type that uses DOLBY® processing to produce a bitstream of identification data during playing. In particular, the identification information may include at least one of a reel identification, a frame identification, and a frame portion identification. For example, the reel may be identified with a number, such as reel 6, and the

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frame and frame portion may be identified with a continuous running number count or film block number. In view of the typical number of frames, and since each frame may be divided into four portions, the block number may range from 0 to about 260,000[,] depending on the length of the motion picture.[.]

Please amend the paragraph beginning at page 12, line 1 as follows:

The system 30a includes a clock [50a] 58a connected to the time tagger 51a. The clock [50a] 58a may be the clock or the personal computer 40a or derived therefrom, as such provides an accurate "wall clock" source for further processing. The time tagger 51a deformats the identification data packets output from the projector 23a. The time tagger 51a also time tags or associates with the data, a time based upon the clock [50a] 58a. In other words, the time tagger 51a cooperates with the clock [50a] 58a for generating time tagged identification data based upon the identification data from the motion picture film 34a during playing thereof.

Please amend the paragraph beginning at page 16, line 30 as follows:

RF operation offers the advantage over infrared of being less susceptible to blockage of a direct path between the transmitter and the receivers[;], however, RF operation may be more susceptible to interference. The digital modulation may offer advantages in avoiding interference, especially, for example, where spread spectrum modulation is used, as illustratively shown in FIG. 6. More particularly, the wireless transmitter 42a' may include a spread spectrum modulator 44a' and the wireless receiver 80a' may include a spread spectrum demodulator 81a'. The spread spectrum may be either direct sequence or frequency hopping as will be appreciated by those skilled in the art. As will also be appreciated by those skilled

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in the art, multiple such spread spectrum communications links can be operated adjacent one another, as in adjacent cinemas **21a-21d**, without causing undesirable mutual interference.

**In the Claims:**

Claim 44 has been amended as follows:

44. (Amended) A supplemental audio content system for providing supplemental audio content to at least one movie patron during playing of a motion picture film and associated soundtrack in a cinema of a cineplex comprising a plurality of individual cinemas, the supplemental audio content system comprising:

    a supplemental audio content player for playing supplemental audio content during playing of the motion picture and associated soundtrack;

    an infrared transmitter connected to said supplemental audio content player;

    at least one earphone to be worn by the at least one movie patron; and

    at least one infrared receiver connected to said at least one earphone and cooperating with said [wireless] infrared transmitter to deliver supplemental audio content to the at least one movie patron.

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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: DIRECTOR, U.S. PATENT AND TRADEMARK OFFICE, WASHINGTON, D.C. 20231, on this 15<sup>th</sup> day of October, 2002.

